

the E6 region of a papillomavirus, a polypeptide from the E7 region of a papillomavirus, a polypeptide from the L1 region of a papillomavirus and a polypeptide from the L2 region of a papillomavirus.

Sub.K1
80. (New) The pharmaceutical composition according to claim 79, wherein the polypeptide from the early E6 region is a nononcogenic variant of the native E6 protein of a papillomavirus.

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81. (New) The pharmaceutical composition according to claim 80, wherein said nononcogenic variant is a variant of the native E6 protein of a human papillomavirus having amino acids 111-115 deleted as compared to said native E6 protein.

cont'd
82. (New) The pharmaceutical composition according to claim 81, wherein said human papillomavirus is HPV-16.

Sub.K2
83. (New) The pharmaceutical composition according to claim 79, wherein the polypeptide from the early E7 region is a nononcogenic variant of the native E7 protein of a papillomavirus.

84. (New) The pharmaceutical composition according to claim 83, wherein said nononcogenic variant is a variant of the native E7 protein of a human papillomavirus having amino acids 21-26 deleted as compared to said native E7 protein.

Sub. K3
85. (New) The pharmaceutical composition according to claim 84, wherein said human papillomavirus is HPV-16.

86. (New) The pharmaceutical composition according to claim 79, wherein said polypeptides of a papillomavirus are expressed from independent expression control elements.

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87. (New) The pharmaceutical composition of claim 79, wherein said papillomavirus is selected from the group consisting of HPV-16, HPV-18, HPV-31, HPV-33 and HPV-45 types.

Sub. K4
88. (New) The pharmaceutical composition of claim 79, comprising a pharmaceutically acceptable carrier allowing administration of said composition by injection into humans or into animals.

Sub X4
89. (New) A method for the treatment or prevention of dysplasia or cancer of the neck of the uterus, comprising administering an effective amount of the pharmaceutical composition of claim 79, to a patient in need of such treatment.

90. (New) A method for the treatment or prevention of a papillomavirus infection, comprising administering an effective amount of the pharmaceutical composition of claim 79, to a patient in need of such treatment.

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91. (New) A pharmaceutical composition intended for the treatment or prevention of a papillomavirus infection or tumor, which comprises as therapeutic agents a combination of early and late papillomavirus polypeptides consisting of a polypeptide from the E6 region of a papillomavirus, a polypeptide from the E7 region of a papillomavirus, a polypeptide from the L1 region of a papillomavirus and a polypeptide from the L2 region of a papillomavirus and at least one polypeptide having an immunostimulatory activity selected from the group consisting of interleukin-2, interleukin-7, the co-adhesion molecule B7.1 and the co-adhesion molecule B7.2.

Sub X5
92. (New) The pharmaceutical composition according to claim 91, wherein the polypeptide from the early E6 region is a nononcogenic variant of the native E6 protein of a papillomavirus.

93. (New) The pharmaceutical composition according to claim 92, wherein said nononcogenic variant is a variant of the native E6 protein of a human papillomavirus having amino acids 111-115 deleted as compared to said native E6 protein.

Sub. K6

94. (New) The pharmaceutical composition according to claim 93, wherein said human papillomavirus is HPV-16.

95. (New) The pharmaceutical composition according to claim 91, wherein the polypeptide from the early E7 region is a nononcogenic variant of the native E7 protein of a papillomavirus.

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96. (New) The pharmaceutical composition according to claim 95, wherein said nononcogenic variant is a variant of the native E7 protein of a human papillomavirus having amino acids 21-26 deleted as compared to said native E7 protein.

Sub. K7

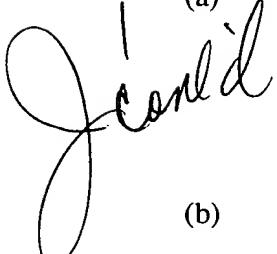
97. (New) The pharmaceutical composition according to claim 96, wherein said human papillomavirus is HPV-16.

98. (New) The pharmaceutical composition according to claim 91, wherein the polypeptide having an immunostimulatory activity is interleukin-2.

99. (New) The pharmaceutical composition according to claim 91, wherein the polypeptide having an immunostimulatory activity is the co-adhesion molecule B7.1.

100. (New) The pharmaceutical composition according to claim 91, wherein said early and late papillomavirus polypeptides and said polypeptide having an immunostimulatory activity are expressed from independent expression control elements.

101. (New) The pharmaceutical composition according to claim 91, wherein said composition consists of :



- (a) a nononcogenic variant of an E6 protein of a human papillomavirus, wherein said nononcogenic variant is a variant of the native E6 protein having amino acids 111-115 deleted as compared to the native E6 protein,
- (b) a nononcogenic variant of an E7 protein of a human papillomavirus, wherein said nononcogenic variant is a variant of the native E7 protein having amino acids 21-26 deleted as compared to the native E7 protein,
- (c) a polypeptide from the L1 region of a human papillomavirus,
- (d) a polypeptide from the L2 region of a human papillomavirus, and
- (e) interleukin-2.

102. (New) The pharmaceutical composition according to claim 101, wherein said human papillomavirus is HPV-16.

103. (New) The pharmaceutical composition according to claim 91, wherein said papillomavirus is selected from the group consisting of HPV-1 6, HPV-1 8, HPV-31, HPV-33 and HPV-45 types.

Sub.K8

104. (New) The pharmaceutical composition according to claim 91, comprising a pharmaceutically acceptable carrier allowing administration of said composition by injection into humans or into animals.

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105. (New) A method for the treatment or prevention of dysplasia or cancer of the neck of the uterus, comprising administering an effective amount of the pharmaceutical composition according to claim 91, to a patient in need of such treatment.

106. (New) A method for the treatment or prevention of a papillomavirus infection, comprising administering an effective amount of the pharmaceutical composition according to claim 91, to a patient in need of such treatment.

Sub.K9

107. (New) A method for the treatment or prevention of dysplasia or cancer of the neck of the uterus, comprising administering an effective amount of the pharmaceutical composition according to claim 101, to a patient in need of such treatment.

Subj

108. (New) A pharmaceutical composition intended for the treatment or prevention of a papillomavirus infection or tumor, which comprises as therapeutic agents, a combination of polypeptides from the early region of a papillomavirus and at least one polypeptide having an immunostimulatory activity, wherein said combination of polypeptides from the early region of a papillomavirus consists in the E6 and the E7 polypeptides and wherein said polypeptide having an immunostimulatory activity is selected from the group consisting of interleukin-2, interleukin-7, the co-adhesion molecule B7.1 and the co-adhesion molecule B7.2.

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109. (New) The pharmaceutical composition according to claim 108, wherein the polypeptide from the early region of a papillomavirus is a nononcogenic variant of the E6 and/or E7 protein of a papillomavirus.

110. (New) The pharmaceutical composition according to claim 108, wherein the polypeptide having an immunostimulatory activity is interleukin-2.

111. (New) The pharmaceutical composition according to claim 108, wherein the polypeptide having an immunostimulatory activity is the co-adhesion molecule B7.1.

112. (New) The pharmaceutical composition according to claim 108, wherein said polypeptide from the early region of a papillomavirus and said said polypeptide having an

immunostimulatory activity are expressed recombinantly from independent expression control elements.

113. (New) The pharmaceutical composition according to claim 108, wherein said composition consists of :

- (a) a nononcogenic variant of an E6 region of a human papillomavirus, wherein said nononcogenic variant is a variant of the native E6 protein having amino acids 111-115 deleted as compared to the native E6 protein;
- (b) a nononcogenic variant of an E7 region of a human papillomavirus, wherein said nononcogenic variant is a variant of the native E7 protein having amino acids 21-26 deleted as compared to the native E7 protein; and
- (c) interleukin 2.

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114. (New) The pharmaceutical composition of claim 113, wherein said human papillomavirus is HPV-16.

115. (New) The pharmaceutical composition of claim 108, wherein said papillomavirus is selected from the group consisting of HPV-16, HPV-18, HPV-31, HPV-33 and HPV-45 types.

Sub K10

116. (New) The pharmaceutical composition of claim 108; comprising a pharmaceutically acceptable carrier allowing administration of said composition by injection into humans or into animals.

117. (New) A method for the treatment or prevention of dysplasia or cancer of the neck of the uterus, comprising administering an effective amount of the pharmaceutical composition according to claim 108, to a patient in need of such treatment.

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118. (New) A method for the treatment or prevention of dysplasia or cancer of the neck of the uterus, comprising administering an effective amount of the pharmaceutical composition according to claim 113, to a patient in need of such treatment.

119. (New) A method for the treatment or prevention of a papillomavirus infection, comprising administering an effective amount of the pharmaceutical composition according to claim 108, to a patient in need of such treatment.

120. (New) A method for the treatment or prevention of a papillomavirus infection, comprising administering an effective amount of the pharmaceutical composition according to claim 113, to a patient in need of such treatment.